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ABSTRACT

A parental involvement program was developed and implemented in a prekindergarten class setting. The program focused on using a "talking" computer to bring the adults into the classroom to work with the students. The program featured child-generated, parent-transcribed, computer-reproduced whole language stories for use at home and school. Parents were taught how to use the computer and the software and were encouraged to work with their children and other students during the school day. Results indicated that the program was significantly successful, with dramatic increases recorded in the number of classroom volunteers. It fostered a new sense of community among the parents, leading to a greater degree of cooperation and mutual support. Parent and student attitudes proved positive and parent/child interactions in the classroom increased. (A brief list of resources, the parent meeting invitation, the parent volunteer survey form, a computer reference sheet, the parent involvement questionnaire, a table of data, and sample student stories are attached.) (Author/RS)

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IMPROVING STUDENTS' LANGUAGE AND PARENTAL CLASSROOM INVOLVEMENT THROUGH THE USE OF A COMPUTER AND MULTI-MEDIA APPLICATIONS

by

Laura A. Ingle

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A Practicum Report

Submitted to the Faculty of the Center for Advancement of Education of Nova University in partial fulfillment of the requirements for the degree of Master of Science

The abstract of this report may be placed in a National Database System for reference.

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Abstract

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A parental involvement program was developed and implemented in a pre-kindergarten class setting. The program focused on using a "talking" computer to bring the adults into the classroom to work with the students. The program featured child-generated, parent transcribed, computer reproduced whole language stories for use at home and school. Parents were taught how to use the computer and software and were encouraged to work with their children and other students during the school day.

The results indicated the program was significantly successful with dramatic increases recorded in the number of classroom volunteers. It fostered a new sense of community among the parents, leading to a greater degree of cooperation and mutual support. Parent and student attitudes proved positive and parent/child interactions in the classroom increased. Appendices include computer software resources, questionnaires, and sample stories.

Authorship Statement

I hereby testify that this paper and the work it reports are entirely my own. When it has been necessary to draw from the work of others, published or unpublished, I have acknowledged such work in accordance with accepted scholarly and editorial practice. I give this testimony freely, out of respect for the scholarship of other professionals in the field and in the hope that my own work, presented here, will earn similar respect.

Laura A. Ingle

Laura A. Ingle

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Chapter I

Purpose

Background

The practicum site was located in a large urban community on the southeastern coast of the United States. The community included military, industrial, business, and tourist economic bases. The county school district constituted the second largest employer in the area, encompassing 105 elementary schools, 22 middle schools and 20 high schools.

The setting of this practicum was a small elementary school in a semi-industrial area of the city. It was located in an older residential neighborhood that was gradually being replaced with businesses and light industries. The total enrollment of the school was 430 students. This included 317 basic education students in grades pre-kindergarten through five. The school also contained an exceptional student education (ESE) center of 113 students. The exceptional education department included autistic, educable mentally handicapped and hearing impaired

classes in grades pre-kindergarten through five. Many ESE students (including those with specific learning disabilities) were mainstreamed in classrooms with appropriate resources.

The school had a faculty and staff consisting of a principal, a guidance counselor, a media specialist, 25 classroom teachers, three speech therapists, two interpreters for hearing impaired students, 18 paraprofessional assistants, and assorted support staff (clerical, food service, security, and custodial). The school also had the services of several part time resources, including a primary resource teacher, an art teacher, a music teacher, and a physical education coach.

The majority of the basic education students lived in the surrounding neighborhood, and were within a two-mile radius of the school. These students represented the predominantly low socioeconomic level of the area. Using federal established guidelines, 82 percent of the total student body qualified for free or reduced breakfast and lunch. The exceptional education students were transported to the school from all areas

of the city and were incorporated in the above percentages.

The school's ethnic balance reflected a population of 61 percent Caucasian, 38 percent African-American, and 1 percent Asian and Hispanic.

This practicum was implemented in the school's basic pre-kindergarten class. This class received operating funds through the federal Chapter I program. Guidelines and curriculum also were dictated by Chapter I. Participation in the pre-kindergarten was voluntary, since pre-k attendance was not mandatory in the state. The students were enrolled at parental request according to program regulations. The students must have reached the age of four before September 1, 1991 and were required to meet state health and immunization guidelines. The students also must have scored within specific ranges on two separate screenings to determine educational eligibility. Parents agreed upon enrollment to provide necessary transportation to and from the school for the students. Although most pre-kindergarten students were from the immediate neighborhood, some traveled ten miles to school.

The total enrollment of the class during the school year fluctuated between 30 and 35 students. During this practicum, the class had a total enrollment of 34. The ethnic makeup of the class was 58 percent African-American, 39 percent Caucasian, and 3 percent Hispanic. The class was divided into two sessions, each meeting for two and one half hours. The morning session met daily Monday through Friday from 8:30 a.m. until 11:00 a.m. and had 18 pupils. The afternoon session was scheduled from 12:30 p.m. to 3:00 p.m. and had 16 pupils enrolled.

Both classrooms followed the same schedule. The students had resource teachers (art, library, and music) on a rotating schedule. Qualifying students also received speech and/or language therapy weekly. A teacher and a full-time teacher assistant worked with the pre-kindergarten students.

The writer taught the Chapter I Pre-Kindergarten class at the practicum site. The writer had seven years teaching experience, six of which were in the practicum setting. Additional responsibilities included representing the early childhood department at

the practicum site, and serving on the restructuring and shared decision-making committees.

Problem Statement

One of the major purposes of the pre-kindergarten program is to provide developmentally appropriate experiences to facilitate language development in preschool age children. The teacher and assistant used a variety of activities, learning experiences and field trips to accomplish this goal. Students learned both individually and cooperatively through the many "hands-on" activities geared to their particular levels and needs.

Adult-child and child-child verbal interactions were an important and necessary component of the pre-kindergarten agenda. The students followed adult language models, and the adults extended and expanded the children's verbal contributions. The teacher and assistant worked with the students on a variety of levels: listening to stories, reading, asking clarifying questions, providing options for extending and transcribing stories. However, the number of students served often allowed only a minimum of time with each individual student.

One avenue to increase the individual adult-child interactions was to increase the number of adults in the classroom. Volunteers can be helpful alternatives in any classroom. Teachers utilize volunteers in many different ways, ranging from clerical aides, to tutors and assistants. All participants benefit when the parents act as partners with the school in supporting their children's growth and learning (Gelfer and Perkins, 1987). Students react well to parents in the school environment.

> When children have a quality school program and supportive and involved parents, they do better on academic and social skills. Children see parent involvement as a sign that their parents value education. When their parents are involved in their program, they recognize that their parents are not just "leaving them off" and forgetting them (Morrison, 1988:418).

The federally mandated Head Start program was designed to provide a comprehensive developmental program for preschool children from low-income families. Parental involvement has been an integral part of the program since its inception. The evidence of program success when parents are involved shows that:

> In <u>cognitive</u> development, the children whose parents were involved in classroom activities and other programs, were more attentive, and showed greater awareness to various

> experiences. ... They also showed a higher general cognitive development as measured by the Bayley and the Stanford Binet. Most importantly, these effects of cognitive development were retained or extended beyond the preschool experience, while children whose parents did not participate did not make similar gains (Lapides and Lapides, 1981).

The active, involved parent sends the clear message to the student that school is important, and that the parent is interested and cares. Parents tend to be active in the early years of their children's school years. This involvement has a positive influence on the students.

The Chapter I Pre-Kindergarten program attracted parent volunteers for field trips and holiday parties. However, relatively few parents participated in regular school-based learning activities. During the 1989 - 1990 school year, 35 percent of pre-k parents were involved with some school event. Of that number only four parents (less than nine percent) came to observe or help during learning activities.

In 1990-1991 school year, three parents visited during a regular class session (reflecting less than eight percent of the total number of parents), and 38 percent of the parents came to a special event or

activity. During the first four months of the 1991 - 1992 school year, one parent visited the class observing learning activities. Another 20 percent of parents volunteered for parties and field trips.

The pre-kindergarten students needed more parent interaction in the school setting. The parents who did volunteer needed specific ideas and tasks to facilitate the direct interactions. The interaction had to be a positive experience for both the parents and the children. A program needed to be developed to encourage parents to visit the school and become involved with the school, teachers, and their children.

Outcome Objectives

Clearly, there were a limited number of parents who participated with their pre-kindergarten children during school hours. A program to increase parental involvement would be beneficial. In order to measure the effectiveness of such a parent involvement program in the pre-kindergarten setting, the following outcome objectives were established:

Prior to the classroom computer program's implementation, at least 30 percent of the parents, as

evidenced by sign in sheets, would attend an informational meeting explaining the program.

Over a period of 12 weeks, 25 percent of the parents of the pre-kindergarten students would actively participate in a language development program using computers, as measured by computer logs and volunteer sign in sheets.

During the 12 week implementation, at least 50 percent of the participating parents would be expected to complete a questionnaire surveying attitudes about their children's school, parent-school involvement, and desired outcomes. The questionnaire also would assess scheduling concerns, work situations, and time constraints.

During the 12 week implementation, the participating parents would attend a hands-on training session with the computer and the language development software. At least 50 percent of the parents who actively participate would be expected to have a training period, as evidenced by computer logs.

During the 12 week implementation the parent volunteers and the students (working in teams of one adult/one child) would develop one story per session

per team. The teams would print two copies of their stories; one for home use, and one for program documentation.

During the 12 week implementation of the program, 60 percent of the pre-kindergarten students would be expected to work with an adult on the computer as evidenced by computer logs.

At the end of 12 week implementation period, 50 percent of the parents involved in the program would be expected to complete an exiting questionnaire surveying attitudes about their children's school, parent-school involvement, and the parent-involvement program.

At the end of the 12 week implementation period, it was expected that 40 percent of the participating parents would develop a positive attitude about working with the children in the school setting as measured by the exiting questionnaire.

At the end of the 12 week implementation period, it was expected that 40 percent of the participating students would develop a positive attitude about working with their parents at school as measured by answers given to an examiner during informal questioning.

Chapter II

Research and Solution Strategy

Widlake (1987) stated that the parents who become involved in the educational process not only can increase their children's performance, but also influence the education system. When teachers and parents work together to share their expertise, the school can draw on the experience of both groups to become more innovative and more responsive to society's needs. Widlake has identified some factors that may prevent the partnership of parents and teachers, including:

> ... The undifferentiated and stereotyped view of the "parent" held by many professional teachers and the mirror image held by many parents about teachers, so that a high suspicion barrier has to be crossed before action is possible (1987:27).

Crossing the barriers to more effective cooperation between schools and parents may be difficult, but not impossible as evidenced by several British schools visited by Widlake. These schools emphasize collaborative learning to the benefit of all involved.

Swinson and Ellis (1988) constructed a study utilizing such cooperation to improve the language skills of a group of children with learning disabilities. The children ranged in age from three and one half to ten years of age. The major thrust of the project involved parents reading storybooks to their children each day. In addition, the teachers and assistants at school were to read a storybook to each child individually each day. The emphasis was on keeping the parent/child interactions natural and enjoyable. Parent meetings, video presentations, and a lending library of storybooks helped to encourage parent participation.

The program was in effect for ten months. Results were encouraging, with all the children showing improvement in language skills (as measured by Pre-School Language Scales). Teachers reported that students were more interested in books and that concentration had increased during class story times. Speech therapists also reported an increase in the children's skills. Parents greeted the program enthusiastically, as evidenced by the high degree of participation.

> "Parents have proven to be very effective as teachers of their own children in a wide range of skills. It should be no surprise, therefore, that their involvement in this project as storytellers and stimulators of their children's language should prove to be so effective" (Swinson and Ellis, 1988:17).

One program to utilize consistently the tenet of parents as teachers is Project Head Start. Since its inception in 1965, Head Start has included parental involvement as a major component of its program. As Lapides and Lapides (1981) have stated, the family is the primary influence on a child's development, requiring the school and the parents to become "instructional allies." Head Start recognizes this and incorporates parents in program planning, classroom activities, and other activities providing opportunities to work with their children, other parents and staff.

"Individualizing" is a key term when working with parents. Programs must individualize for parents' needs: providing a variety of participation opportunities, a variety of parent education content, and flexibility in scheduling for optimum involvement (Lapides and Lapides, 1987).

Often an innovative approach is an effective method to encourage parent involvement. Keeping parents informed increases the likelihood of participation. Hay (1990) incorporated these elements in a program for developmentally young kindergarten students.

In an effort to improve language acquisition skills, Hay utilized critical thinking activities and video technology that provided corrective feedback for the students. Parents were an integral part of the process through meetings and regular child-generated newsletters. At the end of the project, parents were provided with follow-up language and critical thinking activities, pertaining to organization, analysis, synthesis and problem solving.

Results were encouraging with 75 percent of the students completing the activities, and an average seven-month increase in students' developmental ages. The use of video technology was a valuable learning tool and was well received by parents and administrators.

Other tools of technology can include computers. Meyers (1986), a clinical linguist, used computers with

synthesized speech to help children acquire and use language. Working with language delayed and other special needs children, Meyers developed specialized software that allows toddlers to talk using a computer membrane keyboard. Contrary to initial opinions, the addition of computer synthesized speech enhanced the children's desire to learn language.

> The computer gives children the power to easily convey their own meanings through language, motivating them to learn the formal grammar of spoken and written English (Meyers 1986:20).

Research conducted by Meyers with visually handicapped toddlers, pre-schoolers with Down's Syndrome and other language impaired children found that, when the children were allowed control of the speech output, they actually spoke more.

Language and concept enrichment lend themselves to computer-aided instruction easily. The computer can be a very patient teacher and provide the repetition that young children need. Schetz (1989) initiated a model project that combined volunteer efforts and computer aided instruction to tutor kindergarten students. These students had scored low on screenings of articulation, language, and concepts, but had not

scored low enough for diagnostic testing or direct intervention. This program was established to help those students that "fell through the cracks."

Once students were identified, mothers volunteered to help with the implementation. Principals, teachers, and speech-language pathologists helped assure that the enrichment program ran smoothly. Commercial age-appropriate software was used (the *Stickybear*^{tm} series). Results were tabulated through the use of questionnaires completed by the adults involved. Most agreed the program was effective, and that it should continue with minor adjustments. Teachers agreed that 41 percent of the students improved. Volunteers acknowledged that the software was easy to use and understand and that it held the students' interest. The volunteers not only worked with the students on the computer, but also were encouraged to talk with the students, ask questions and extend conversations about the software.

Specialized software is not always a necessity with young children. A simple word processing program can be an invitation to play. Generally, speech and language play are thought of synonymously. There are

times, however, when children like to play and experiment with written forms of language.

Piazza and Riggs (1984) studied children as they experimented with a computer learning center in their kindergarten classroom. The computer is a simplified writing tool since it does not require extreme physical coordination or manipulation. In a word processing mode, it allows the children to interact and develop hypotheses, solve problems and generally play with letters, symbols and words.

There are several stages of computer language play that correspond to the stages of written language play. One of the earliest stages is scribbling. Computer scribbling would take the form of strings of random letters, symbols and numbers. "That print stands for something meaningful is an important discovery, the foundation for beginning writing" (Piazza and Riggs, 1984:66). Pattern writing will then emerge: repetitive patterns (xxxxxxxxx), sequential patterns (12345), and combined patterns (AAAAAaaaaa).

> the computer's toy-like qualities appeal to children . . . its use as a writing tool may influence perception, conceptual organization, and formation of concepts of print (Piazza and Riggs, 1984:75).

Writing development follows the same pattern as language development and children move from single words to word combinations to simple sentences. As they progress, the children experiment with sounds, words, and patterns. Computers can encourage speech and writing play and experimentation with words and stories.

Tan (1985) explored the entire notion of computers in a preschool classroom. The point was raised that computers do not need to be introduced merely to familiarize children with them. Future life will not depend on whether a child can program a computer, just as it is not now necessary to assemble an automobile. The significance in any toy or piece of equipment is in the way the children use them. The value is in the exploration, creativity, and challenge that the equipment represents to the child at the present level.

Tan believes that a computer can stand with the blocks, sandbox, housekeeping, clay and manipulative areas in a preschool. The flexibility and complementary nature of the computer and its potentiality for added experiences could make it a valuable part of the preschool world. As with any

piece of equipment, the computer could only support the learning, not replace it. All is dependent upon how the new technology is used.

The technophile quality of computers has not been overlooked. Olson (1983) explored the theory that computers are simply a novel learning experience and that the popularity would fade with students. Findings suggested that even veteran computer users retain positive attitudes despite glitches and "bugs" encountered. Computers are stimulating with color, sounds, motion, lights, and pictures. Most students will even tend to spend longer amounts of time at the computer than scheduled. This is not to say that all interactions are solitary endeavors, one student with a computer alone.

Properly produced software including games and activities can promote participatory learning. The computers allow instructors to adjust for the ability levels of the students.

> ... the games elicit rich, noncompetitive interaction from students, and such cooperative activities promote communication as well as social interaction (Olson, 1983).

Clements' (1987) review of research found many of these same themes reported again and again. Are

computers developmentally appropriate for young children? How do children interact with computers? What effect do computers have on social and emotional growth? What about language development? The field is growing and expanding, and each day more is learned. However, the trends in research point to encouraging answers for these and other questions.

Developmentally appropriate is a prevailing key phrase in early childhood education. Concerns arise over whether preschoolers are being pushed into reading or writing too early. Computers are no more dangerous than books, pencils and paper all of which can rush a young child, depending on how they are used. Computers can be used in developmentally appropriate experiences. Suggestions include that the best way to accomplish this would be to allow the child to choose when to work and with what activities, just as in any preschool learning area.

Young children seem to interact well with computers, gaining confidence and exploring with ease. The key in this instance is to provide adult support. "Children are more attentive, more interested and less frustrated when an adult is present" (Clements

1987:34). It is also interesting that a computer center continues to be an attraction, but not at the expense of more traditional centers (blocks, house, sand, etc.).

Social and emotional factors seem to fare well with computers in the classroom. It was found that the computer actually tended to promote social interactions. Children prefer working together on the computer, and will often help and teach each other. This collaboration also ties in to an increase in language development.

Computers are not a definitive answer, rather they can be a tool to help children learn. A computer in the classroom can only be as effective as the software, the amount of time used, and the way in which it is used.

The writer resolved to draw these elements together to create a parent involvement program focusing on language development using computers. Widlake (1987), and Swinson and Ellis (1988) were able to see beneficial results through the parental support aspect. The writer's program utilized a volunteer program similar to the one developed by Schetz (1989).

The volunteers worked with the children using a computer and "talking" software to create original stories, pictures, and storybooks (Appendix A:45). Pre-kindergarten children participated in these story-building sessions with parents and worked on developing language skills.

Chapter III

Method

Past efforts to bring parents into the classroom for parent/child involvement have proven to be ineffective. In an effort to enhance parent participation in the classroom, the novelty of a talking computer was used. A benefit provided by this approach was to introduce computers to both the students and parents, demonstrating the usefulness of computers in the classroom environment. The adoption of the talking computer was a great aid in overcoming "computer-phobia" among adults. The children's natural curiosity and enthusiasm inspired the parents, as they assisted the children in operating the computer and software.

The following strategy describes the significant activities used in implementing the volunteer/computer program.

Week One

In week one of implementation, the writer set up a computer station in the classroom. The computer area

was delineated; and the computer furniture, hardware and software were installed. In addition, the writer began instructing the students care and use of the computer, vocabulary, keyboard and mouse skills.

Week Two

In week two of implementation, the writer arranged parent meetings for the purposes of explaining the volunteer/computer program. Two parent meetings were scheduled at the school (Appendix B:47). One meeting took place during the morning pre-kindergarten class session and was attended by seven parents. Another meeting occurred during the afternoon session with six parents in attendance. The students were not present during these meetings. The meetings' agendas included: welcoming remarks, discussion of school volunteers and importance of parental involvement, and the preliminary attitude questionnaire (Appendix C:49). The parents were given ample time and encouragement to complete the questionnaire during the meeting. At the conclusion of the meetings, the writer provided a brief overview of the proposed volunteer/computer program.

During the second week of implementation and following the initial meetings, the author and the 13

interested parents consulted to develop a tentative schedule. Times were arranged for the parents to come to the classroom to participate in training sessions on the computer and become familiar with the programs (Appendix D:51). Student activities during week two entailed activities utilizing a dismantled computer keyboard to help familiarize students.

Week Three

Training on the computer occurred during week three of implementation. The parents and students were using a 386SX personal computer equipped with a 40 megabyte (MB) hard drive, 3.5" and 5.25" floppy drives, 1 MB of random access memory (RAM), a soundboard with speakers and headphones, a .31 dot pitch color VGA monitor, and a mouse. There also was a quiet portable thermal printer available.

During week three, the parents had opportunities to work with the computer at scheduled times before, during and after school. The parents received instruction from the writer regarding the computer hardware and software. Many of the parents worked in pairs to learn the computer and software. During these training sessions the parents worked with each other

and the writer to become familiar with programs and computer. Once they had a chance to work on the computer, the parents began to become enthused about the volunteer/computer program. Parent teams worked together to solve problems they were having with the unfamiliar software. The writer and parents discussed schedules for future volunteer sessions during this week. In one instance, two parents worked out mutual babysitting arrangements, so that both would have opportunities to work with their school age children.

The software used in the volunteer/computer program included talking story writing programs. *The Dinosaur Discovery Kit*[tm] and *The Puzzle Storybook*[tm] programs produced by First Byte were utilized initially. These programs included fill in the blank stories and picture prompts, as well audible prompts. Both programs spoke to the operators using their first names. Depending on the comfort level of the individual parent, the author introduced the third software program, *Kidworks*[tm] by Davidson. This program also had speech capabilities. The writing portion of this program resembled a blank primary tablet. Word and

icons (rebus) were used to create the stories. All three programs were operated through use of the mouse.

Week Four

During this fourth week, the parents had their first opportunity to work with the children on the computer. A total of 14 parents worked with 20 children using the computer. Each child created one or two stories that were printed out for school and home use.

Each parent worked with one child on the computer for a 10 to 30 minute session. The parents had the option to work both with their child and other students. The sessions occurred during their children's regular class times and were concurrent with the class' activities. The parents' schedules would dictate how often and how long they could volunteer. The writer was available in the event of any problems. However, the parents and students were encouraged to work together to explore and create.

The parents were requested to sign the school's volunteer book in the main office before entering the class. In addition, the parents were to sign the class

computer log facilitating record-keeping of times, students, and volunteers.

Week Five

Week five was an active week of implementation with 11 parents volunteering and working with 27 students. Although three parents were unable to return due to transportation and scheduling difficulties, the other parents began to come in for extra sessions working with two, three and even four children. The parent/child teams created fill in the blank stories, as well as original pictures and stories. The students always took one copy home and one copy remained in the class. These class copies were decorated, displayed and read during the daily story time.

Week Six

The parent volunteers were limited this week due to several separate factors. An unexpected change in the weather precipitated a high number of absences among the children of the volunteers. A midweek field trip was scheduled, which resulted in the loss of a day's sessions. The writer was involved in an inservice

conference on another day. However, one parent was able to work with four students during one class period.

Week Seven

Seven parents volunteered this week and worked with a total of 15 children. A few parents not only chose to volunteer in class two or more days, but also tended to stay for longer amounts of time. These parents would finish working with their child and then look for other children who were curious about the computer.

Week Eight

This week of implementation consisted of four days due to a school planning day. Despite the short week, nine parents visited the classroom and worked with 20 students. Again, some parents were working with several students during their sessions. During this week, there were also two new parents who expressed interest in the program. The writer invited them to see the class. During their visits, the writer familiarized the parents with the program. The

children then took over as tutors for the new volunteers.

Week Nine

Ten parents worked with 20 children during the week. The writer had been encouraging the students to bring their parents to see the computer. Two more new volunteers arrived this week with their children. The two new parents were given a quick familiarization and began to work with their children. The writer noted that the parents and children were able to encourage each other to figure out different programs and games.

Although none of the parents had dropped out completely, some volunteers had been missing sessions. Mid-program adjustments, corrections and additional training were occurring when necessary. During these last weeks, the parents had more opportunities to work with the children and explore the capabilities of the computer's software. Each parent/student team was producing one story per session. These stories were used in class and at home for whole language experiences.

Week Ten

There were four volunteer parents who worked with five students during this week. The parents were hindered by the class schedule for the week, which included a field trip, a class party and the beginning of the spring vacation.

Week Eleven

The week following the vacation was an active one for the program. Eight parents came in as volunteers, working with 18 students. The writer had announced that the program was drawing to a close, and some of the parents came to class and stayed for longer periods, working with several students.

Week Twelve

During the final week of implementation, the writer took the opportunity to work with several children using the various games and other software programs before dismantling the computer center.

The writer scheduled two meetings for the participating parents. Again one meeting was held during the morning session, and one during the

afternoon session. The meetings' agendas included: welcoming remarks, sharing of parent/child created stories and books, and an exiting attitude questionnaire (Appendix E:53). Parents were given ample time and opportunity to complete the questionnaire during the meeting. Results were tabulated by the writer and verified by the school's Chapter I lead teacher.

Also during week twelve, the pre-kindergarten teacher assistant questioned the participating students about their feelings toward their parents volunteering in the classroom. The questioning was performed informally during class time.

Chapter IV

Results

The twelve week program using computers and multi-media applications was designed to increase the students' whole language skills and parental involvement in the pre-kindergarten setting. Goals and objectives were established to help prepare and activate such a program. Evaluation was handled in several phases during the implementation of the project. In order to assure that the outcome objectives had been achieved, the following measurement criteria were established:

It was expected that prior to the classroom computer program's implementation, at least 30 percent of the parents, as evidenced by sign in sheets, would attend an informational meeting explaining the program. This objective was achieved with 38 percent of the parents attending the meetings.

Over the 12 week period, 25 percent of the parents of the pre-kindergarten students were expected to participate in the language development/computer

program, as measured by computer logs and volunteer sign in sheets. During the program, 53 percent of the parents visited the classroom and worked with children on the computer for at least one session (Appendix F:55). This objective was achieved, far exceeding anticipated percentages.

During the 12 week implementation, it was expected that the interested parents would complete a questionnaire surveying attitudes about their children's school, parent-school involvement, and desired outcomes. The questionnaire also assessed scheduling concerns, work situations, and time constraints. At least 50 percent of the parents who actively participated in the program were to have a completed questionnaire on file. Of the parents who worked in the classroom, 82 percent completed a questionnaire, accomplishing this objective.

Another objective for the 12 week implementation, anticipated that interested parents would attend a "hands-on" training session with the computer and the language development software. At least 50 percent of the parents who participated were to have a training period as evidenced by computer logs. The objective

was attained when 88 percent of participating parents completed a training session.

It was expected that during the 12 week implementation the parent volunteers and the students (working in teams of one adult/one child) would develop one story per session per team. The teams would print two copies of their stories; one for home use, and one for program documentation. This objective was achieved. The students took copies of their stories home, and class copies were displayed and/or read during story times.

The writer noted several coincidental benefits from the computer/story sessions. One benefit was that many more students began to dictate creative language experience stories to the teacher and assistant during regular class time, separate from the computer sessions. In addition, one student who had previously been non-communicative with adults began to acknowledge both the teacher and assistant, answer some questions and dictate language experience stories after her mother began volunteering in the classroom.

During the 12 week implementation of the program, it was anticipated that 60 percent of the pre-

kindergarten students would work with an adult on the computer as evidenced by computer logs. This objective was completed with 100 percent of the students working with an adult using the computer. In addition, several parents brought other children to their computer volunteer sessions. These siblings, generally three and four years of age, also had an opportunity to work with their parents on the computer using appropriate programs. In one instance, a student's hearing impaired older sister (approximately seven years old) accompanied the parent and also worked with the program. Another student who was mainstreamed in the Chapter I Pre-Kindergarten class from a Preschool Handicapped class during the implementation also was able to participate in the computer activities.

At the end of 12 week implementation period, it was expected that 50 percent of the parents involved in the program would complete an exiting questionnaire surveying attitudes about their children's school, parent-school involvement, and the parent-involvement program. Seventy percent of participating parents completed a questionnaire, fulfilling this objective.

It was anticipated that at the end of the 12 week implementation period, 40 percent of the participating parents would develop a positive attitude about working with their children in the school setting, as measured by the exiting questionnaire. Ninety-one percent of the parents responding reported having a positive experience working with their children in the classroom.

Many parents expanded upon the basic questionnaire and wrote comments concerning their feelings and impressions about the computer program. Most parents responding wrote that they and their children enjoyed the program. One parent wrote, "I had a positive experience. I got to watch my son develop sentence forming skills. ... My son wrote a story about his sister and he read it to her." Other benefits noted by parents included: "just to get to know my children's friends"; "they [the students] was [sic] in control"; "they [the students] seen [sic] that Mama's are not scared of school, so they are not as much." Many parents also reported that their children brought home stories proudly showing them to families and friends.

At the end of the 12 week implementation period, it was anticipated that 40 percent of the participating students would develop a positive attitude about working with their parents at school, as measured by answers given to an examiner during informal questioning. The students responded enthusiastically to the program and 100 percent of the students indicated positive attitudes.

Chapter VII

Recommendations

The program developed in this practicum was extremely successful in bringing more parent volunteers into the pre-kindergarten classroom. The program also resulted in expanding the whole language experiences of the students. The novelty of the "talking computer" was very attractive for both the parents and students. Although the writer, parents and students would welcome an ongoing program of this nature, financial constraints (i.e. lack of funds to furnish the necessary hardware and software for the classroom) preclude this from occurring at this time.

At the conclusion of this practicum, the writer met with the school's Chapter I lead teacher/computer lab manager to discuss results. The writer also shared the results with all interested parties on a school-wide basis. The express purpose of sharing this practicum with all concerned was to foster and encourage greater utilization of parent volunteers and the introduction and use of computer based

instructional programs at the pre-kindergarten level. As an added benefit, the introduction of this package would encourage greater parental classroom participation supporting a positive attitude toward school by both parents and children. Based upon the positive results from this practicum, the writer and the other early childhood teachers at the practicum site are applying for private, state and federal educational grants to enable the expansion and continuation of this program.

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Appendices

Appendix A

Resources

Resources

Dinosaur Discovery Kit (Computer Program). Santa Ana, CA: First Byte, 1989.

Kidworks (Computer Program). Torrance, CA: Davidson and Associates, Inc., 1991.

Puzzle Storybook (Computer Program). Santa Ana, CA: First Byter 1989.

Appendix B

Parent Meeting Invitation

Parent Meeting Invitation

Dear Parents,

There will be a Pre-K parent meeting on Tuesday, February 11, 1992. The meeting will be at 10:30 a.m. in our classroom (room 1).

We are going to discuss several important items, including an exciting new program for you and your children! If you enjoyed the book and video checkouts, you and your child will *love* this new program!

See you on Tuesday!

Dear Parents,

There will be a Pre-K parent meeting on Tuesday, February 11, 1992. The meeting will be at 12:30 p.m. in our classroom (room 1).

We are going to discuss several important items, including an exciting new program for you and your children! If you enjoyed the book and video checkouts, you and your child will *love* this new program!

See you on Tuesday!

Appendix C

Parent Volunteer Survey

Parent Volunteer Survey

1. Have you volunteered in your child's class or school?_____ If you answered yes:
What types of activities were you helping with?

_____

_____

Did you have a positive or negative experience volunteering?

_____

_____

2. If you have not volunteered before, why or why not?_____

_____

3. What types of things do you expect a volunteer would be asked to help with or do in a classroom?

_____

_____

4. Should schools ask for volunteers? _____
Why or why not? _____

_____

5. Should a volunteer work with his or her own child?
_____ Why or why not?_____

_____

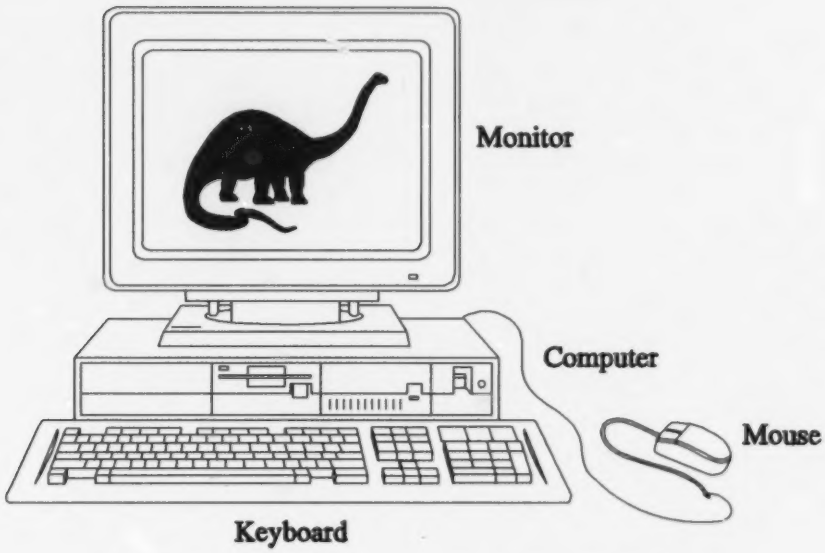
6. Do you feel that volunteers are important to a classroom? _____

_____

Appendix D

Computer Reference Sheet

COMPUTER REFERENCE SHEET



Monitor: the viewing screen, it works like a television.

Computer: the gadget that makes the pictures on the monitor. It uses electricity, electronic chips and magic to work.

Keyboard: the typewriter part that lets you tell the computer what to do.

Mouse: the little attachment that moves the arrow on the monitor. The buttons on the mouse let you tell the computer what to do.

Icon: the little pictures on the monitor. Usually you can use the mouse to put the arrow on the picture (or icon) and push the left mouse button to pick that selection.

Appendix E

Parent Involvement Questionnaire

Parent Involvement Questionnaire

1. Did you have an opportunity to volunteer in your child's classroom during the computer program?_____

If you answered yes:

Did you have a positive or negative experience volunteering? Explain.

_____

_____

3. What types of things did you expect a volunteer would be asked to help with or do in a classroom?

_____

_____

4. Did you have an opportunity to work with another child in addition to your own?_____

If you answered yes:

Did you enjoy working with other children?_____

Why or why not? _____

5. Do you think the children enjoyed the computer program? _____

Why or why not?_____

_____

6. Did your child bring home computer papers, pictures, or stories? _____ If you answered yes:

Did your child talk about, explain or try to "read" the papers? _____

7. What benefits (if any) do you believe the extra adults in the classroom gave the children? _____

_____

8. How can we improve the computer program? Please list any suggestions on the back.

Appendix F

Comparison of Parent Volunteers in Pre-K

1989-1992

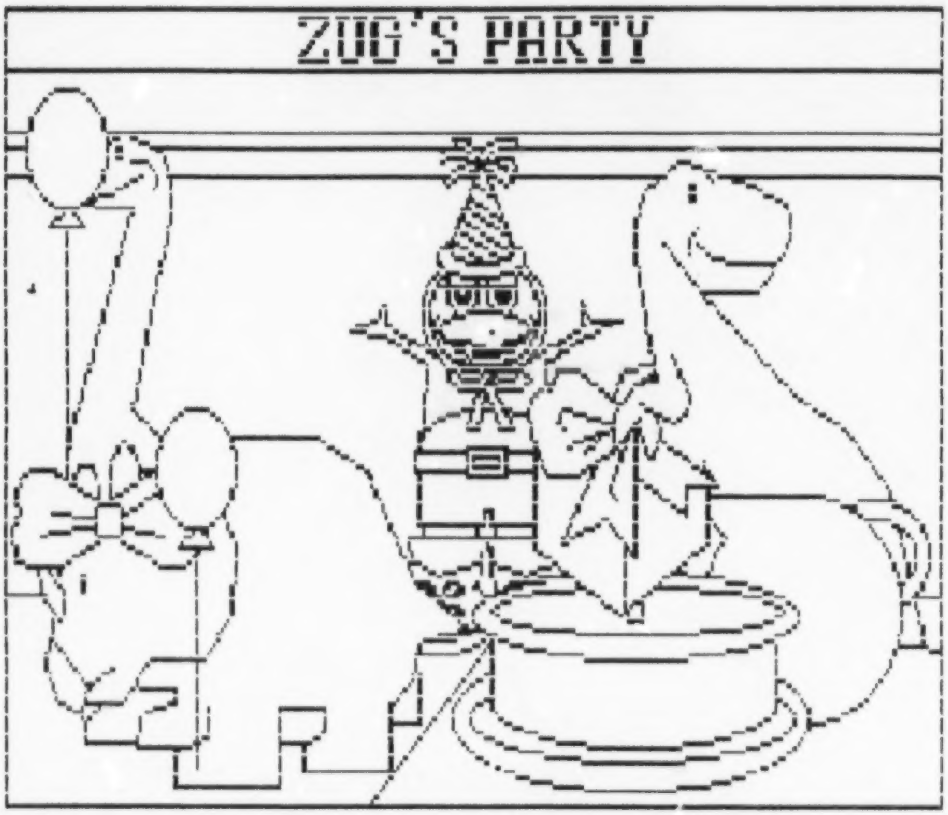
Comparison of Parent Volunteers in Pre-K 1989-1992

Year	Class Enrollment	Number of Parent Volunteers	Percentage of Parents Volunteering
1989-1990	45	4	8.89%
1990-1991	38	3	7.89%
1991-1992	34 *	18 *	52.94% *

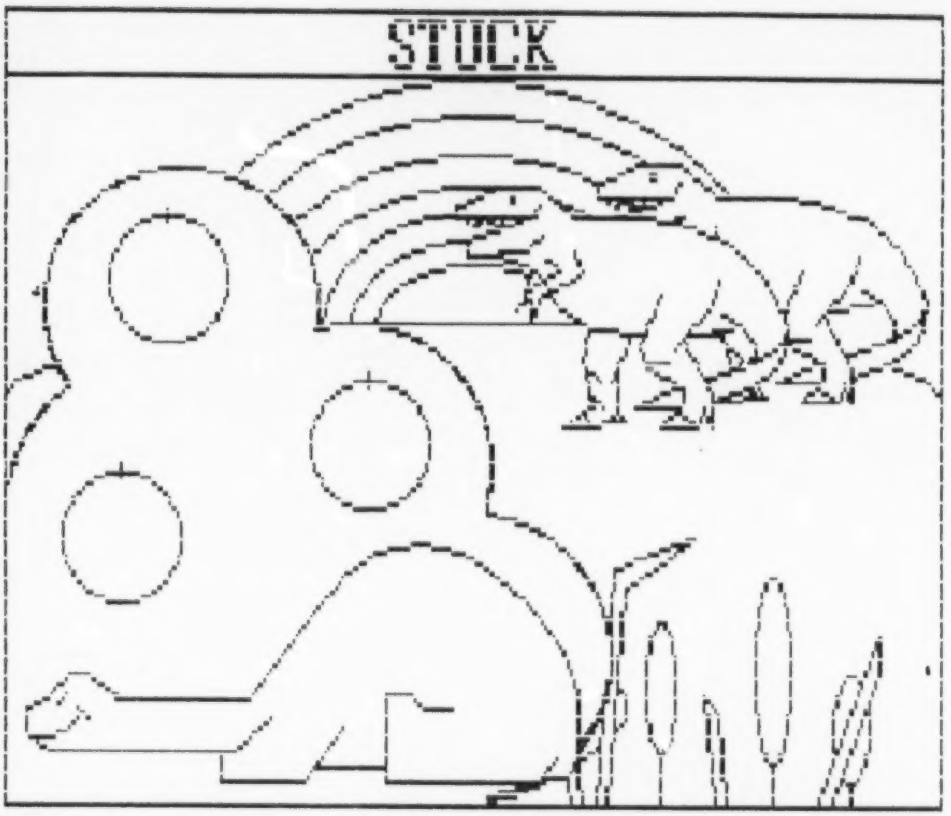
* denotes figures obtained during practicum implementation.

Attachments

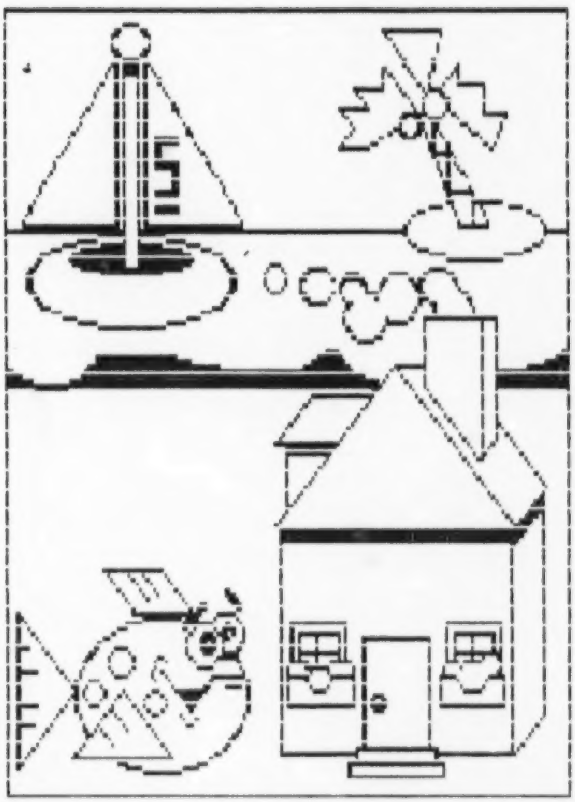
Sample Student Stories



One day Zug decided to have a party at his house. He invited a Brontosaurus with a purple belt. He invited a Triceratops with a yellow bow. Zug gave each one a party balloon. He prepared the table with cake and punch. Oh no! A surprise guest arrived. It was a Tyrannosaurus with scary teeth. To get him to smile, Zug had to give him the biggest present.

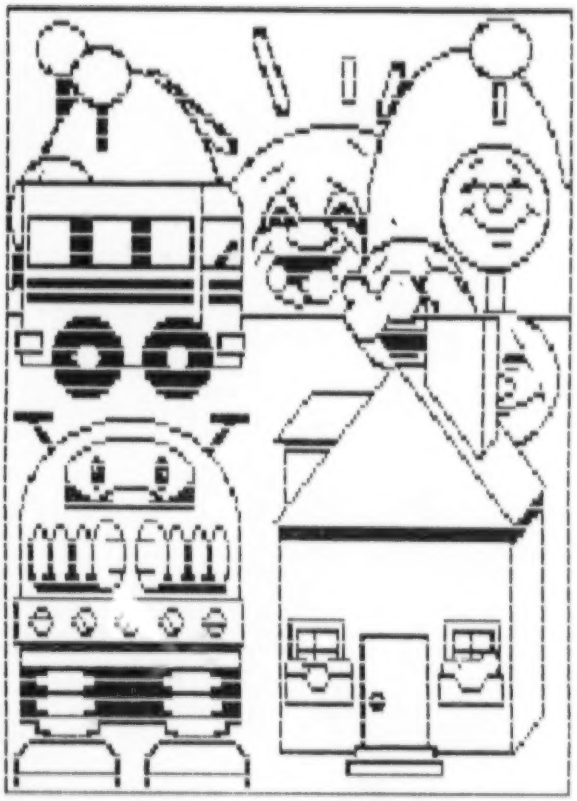


Once upon a time a Brontosaurus was stuck in a big mud hole. He looked up and saw a rainbow. In the distance, he could see two Allosaurs. They were coming his way! He pushed and pulled until he was safely behind a big tree. The other dinosaurs couldn't find him. They were so angry they turned purple. The Brontosaurus was so tired he took a nap.

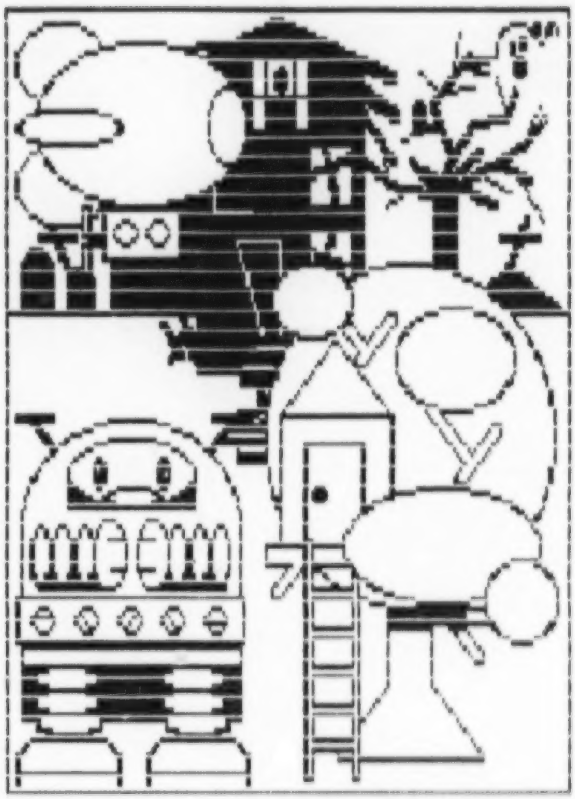


Satoria likes the boat and water that is around her house and her big purple fish.

the end.

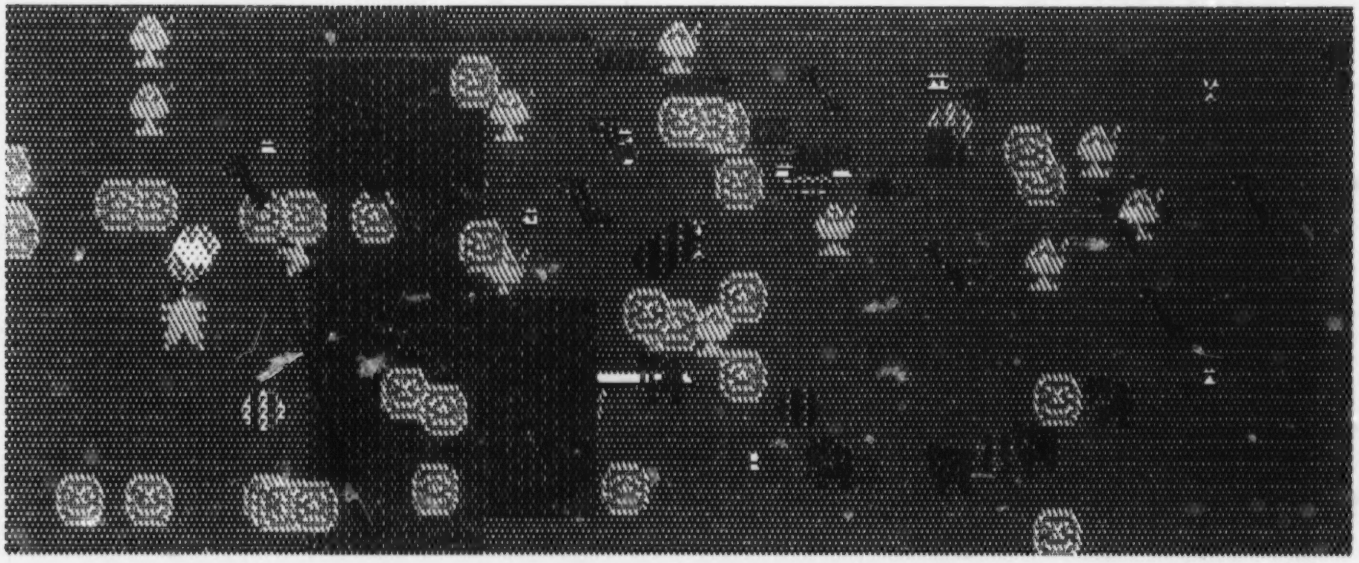


One day the robot left his home and went to the park. There he played all day. At the end of the day he rode the bus home. And so did everyone else.



This is the red space ship that the robot lives. Every time he gets through fighting the ghost he gets back in the space ship and go home. The lady in the window watches them fight. The robot tricks the ghost. And the robot always fights the ghost. He punch him in the stomach and kick him in the face and then he fall down.

Destini was dancing with Kevin. And singing let me call you sweetheart. When they all got through they sang another song. Somebody sing a Mexican song. And when they got through all the people went home.



My dad and I went in his van to get gas

in the tank.My dad let me pump the gas. Then we

went in and got a coke.

BEST COPY AVAILABLE